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Data elicited by two questionnaires on the characteristics (numbers, nature, extent, and location) of the multihandicapped population under 21 years of age in California are presented. Based on replies by 613 programs (47% response) and estimated to include 80 to 90% of the state's multihandicapped blind children, statistics concern multihandicapped blind and deaf blind children, each in terms of the following categories: in school, in state hospital schools, not in school but of school age, and of preschool age. Further data treat severity and average number of handicaps as well as frequency of handicaps for 940 multihandicapped blind and 240 deaf blind children. (JD)

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MULTIHANDICAPPED BLIND AND DEAF-BLIND CHILDREN IN CALIFORNIA

by

Berthold Lowenfeld, Ph.D.

May, 1968

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MULTIHANDICAPPED BLIND AND DEAF-BLIND CHILDREN IN CALIFORNIA

by

Berthold Lowenfeld, Ph.D.
Director of the Study

A REPORT

Submitted to the California State Department of Education
Division of Special schools and Services

May 1968

FOREWORD

The Study of Multihandicapped Blind Children in California was carried out under a contract with the California State Department of Education. There are many people, teachers, administrators of public and private schools, directors of private agencies, parents and parent-group representatives, those who work with blind preschool children, medical experts, and alumni representatives of the California School for the Blind, who gave most valuable assistance to the Study either by completing the questionnaires or by giving me the benefit of their advice. To all of them, I owe a debt of gratitude and hope that the results of this Study will justify the confidence expressed by their cooperation.

I want to express my special thanks to Mr. S. W. Patterson, Assistant Chief, Division of Special Schools and Services, Department of Education, State of California, for his constructive support of the Study.

Berthold Lowenfeld, Ph.D.
Director of the Study

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PART I--STATISTICS

Questionnaires

Two questionnaires were developed in order to determine the characteristics (numbers, nature, extent, and location) of the multihandicapped blind population under 21 years of age in the State of California. Questionnaire A (see Appendix) was designed to collect data about multihandicapped blind children in school, and Questionnaire B (see Appendix) for those not in school.

The questionnaires were pretested with teachers and their supervisor at the California School for the Blind. The replies, independently filled out by the teachers and the supervisor for 72 children, showed a high degree of sameness or similarity which indicated that the questionnaires were valid instruments for the purposes pursued by the study.

Distribution of Questionnaires

In order to determine which programs for the educable and trainable mentally retarded and for the orthopedically handicapped had any blind children, 560 return postal cards were mailed to all such programs. Reply cards were received from 476 of these which is a response of 85 percent.

Questionnaires A and B were subsequently mailed to 747 addresses. These comprised all sources from which replies concerning multihandicapped blind children might be expected, such as:

County superintendents of instruction

Special education personnel in county and local schools. If such personnel was not listed, the material was sent to the Principal

Programs for visually handicapped children

California School for the Blind (CSB)

Programs for educable and trainable mentally retarded and orthopedically handicapped children whose reply cards indicated that they had multi-handicapped blind children

State Department of Mental Hygiene

State Hospitals for Mentally Retarded

State Schools for the Deaf (CSD)

State Diagnostic Centers for Neurologically Handicapped Children

County and city public health nurses

Development Centers for Handicapped Minors (DCHM)

State preschool workers in Los Angeles

Variety Club Blind Babies Foundation's preschool workers in San Francisco

Private agencies such as:

- John Tracy Clinic, Los Angeles
- Blind Children's Center, Los Angeles
- Braille Institute of America, Los Angeles
- Foundation for Junior Blind, Los Angeles
- Exceptional Children's Foundation, Los Angeles
- San Francisco Lighthouse for the Blind
- San Francisco Hearing and Speech Center
- Recreation Center for the Handicapped, San Francisco
- Clearwater Ranch, Santa Rosa

Plumfield School, Santa Rosa
Lucinda Weeks School, San Francisco
Easter Seal Society, Sacramento
American Foundation for the Blind, New York City
Rubella Parents Association, Pico Rivera

and a number of ophthalmologists, psychiatrists, and pediatricians who were known to have professional contacts with blind children.

Thus, inquiries were sent to a total of 1,307 programs concerned with handicapped children, including the postal cards already described. Replies were received from 613 sources which constitutes 47 percent of the total mailing. In view of the fact that inquiries were sent to programs for handicapped children of all kinds, of which many certainly did not have any blind children, this return must be considered highly satisfactory. A checkup revealed that all known programs for blind children had replied.

Numerous follow-up efforts were made by conferences and telephone calls to support the case-finding efforts. A deep and active interest in the study was shown by all concerned. It is a conservative estimate that 80 to 90 percent of the multihandicapped blind children's population is included in the Study.

Statistical Analysis of the Questionnaires

The Tables presented in this report include all data received by March 29, 1968.

Table 1 gives the over-all classification and numbers of multihandicapped blind children in California. The first four lines report the numbers of (1) multihandicapped blind children in school, (2) in State Hospital Schools, (3) not in school, and (4) of preschool age. The next four lines report the same for deaf-blind children. The latter are not included in the first four lines. As can be seen from Table 1, there are 1,180 multihandicapped blind children in California of whom 940 are blind children with multiple handicaps (excluding deafness) and 240 are deaf-blind children. There are no statistics available on the number of multihandicapped blind children during past years. A report of the National Study Committee on Education of Deaf-Blind Children, March 1956 gives the results of a national survey for 1954-1955 which "showed a total 245 deaf-blind children as of March 1, 1956" in the United States. At present there is about the same number (240) in California alone. In addition, there are 1,217 visually handicapped patients under 21 years of age in State hospitals not receiving any special education (100 of the 1,317 children in State Hospital Schools are reported on lines 2 and 6).

Multihandicapped Blind Children in School

Tables 2A, B, and C present data on the 537 multihandicapped blind children in school. Table 2A gives their year of birth, grade placement, visual acuity, and cause of blindness.

It can be seen that the year 1953 stands out as the one in which the largest number of multihandicapped children were born. From 1954 on, the numbers decreased which is undoubtedly due to the fact that after 1954 control of retrolental fibroplasia became increasingly effective.

The grade placement of these children does not show a corresponding peak in the seventh or eighth grade. This is understandable because multihandicapped blind children do not progress in the normal way from grade to grade. Therefore, their grade placement does not follow the year of birth pattern but is more evenly distributed. Of the 537 children, 239 (45 percent) are ungraded.

The visual acuity distribution shows that at least 187 (35 percent) of the children have a severe visual loss, while 303 (56 percent) of them are listed as falling under the legal definition of blindness or having better vision than that. Visual acuity was not reported for 47 children (9 percent).

The largest single cause of blindness in this group was retrolental fibroplasia (168 children or 31 percent); next are cataracts (57 or 11 percent); and optic atrophy (42 or 8 percent). For 63 children (12 percent), the cause of blindness was not reported.

Table 2B is a summary of the handicaps listed for each child and also gives data on the recommendations for the future placement of the children. Of the 537 children, 350 (65 percent) are mentally retarded, about one-half of whom fall into the educable range. The next most frequent handicap is "emotional" with 214 children (40 percent) being thus listed. Speech handicaps are listed for 143 children (27 percent). The other handicaps occur for smaller numbers of children though it should be noted that 76 (14 percent) show varying degrees of cerebral palsy and 48 (9 percent) have orthopedic handicaps.

The severity of the handicaps indicates that 30.5 percent of the handicaps are mild, 24.9 moderate, 12.7 severe, with 31.9 percent "degree not reported."

The numbers of handicaps in addition to blindness range from 244 children with only one additional handicap to one child with seven additional handicaps. The average number of handicaps per child (including blindness) was found to be 3.0. This is almost the same number which was reported by James M. Wolf in his study The Blind Child With Concomitant Disabilities in which a total of 453 mentally retarded blind children in residential schools were included. Wolf found an average number of 3.18 concomitant handicapping conditions per child.

No recommendations for future placement were given for 132 children and for only 35 (7 percent) did the teachers indicate that they should not remain in their present placement. In considering this small percentage, one must keep in mind that the only practical alternatives for the placement of children who "should not remain," are either sending them home and leaving them without any educational provision or having the parents commit them to a State Hospital.

Table 2C gives the county distribution of 433 children; 104 who are placed at the California School for the Blind were not included. Of the 433 children, 249 (58 percent) reside in Southern California and 184 (42 percent) in Northern California.

Multihandicapped Blind Children in State Hospital Schools

Tables 3A and B give the relevant statistics for 82 multihandicapped blind children in State Hospital Schools. According to Table 3A, 1953 and 1954 are peak years of birth for this group also.

Since State Hospital Schools do not function by a grade system, all children are ungraded.

This group of children follows, so far as the severity of the visual handicap is concerned, the same pattern as reported in Table 2A. At least 26 (32 percent) of the children are severely visually handicapped, while 46 (56 percent) are listed as "blind." For 10 children (12 percent) no visual acuity was reported.

Among the causes of blindness, retrolental fibroplasia ranks first with 29 (35 percent) and cataracts second with 7 (9 percent), also similar to the group reported in Table 2A. Cause of blindness was not reported for 26 children (32 percent).

As Table 3B shows, 82 children are mentally retarded, most of them (64 or 78 percent) in the trainable category. Among others, communication, speech, and emotional handicaps are more frequently listed. This group of 82 children has almost 50 percent of its handicapping conditions in the moderate (trainable) classification. This raises the question of why they were committed to State Hospitals. Some of them most likely have other handicaps, such as emotional or psychotic ones, which explain their placement; others may be where they are because no other facilities were available. Also, some of them may have been admitted at a young age and remained there though their condition improved.

The average number of handicaps per child, including blindness, is 3.7, almost one more handicap than reported for children attending regular schools (Table 2B).

Multihandicapped Blind Children (School Age) Not Attending School

Tables 4A, B, and C deal with 189 multihandicapped blind children of school age who are not attending school.

Table 4A shows that the peak years of birth for this group were 1952, 1953, and 1954, again the last years of the retrolental fibroplasia epidemic.

Of these children, 115 (61 percent) live at home. 60 (32 percent) have left school, most likely because they were not making any progress, and are also at home, and for 14 children (7 percent) placement was not reported.

This group is largely a low visual acuity group with 108 children (57 percent) reported as being either totally blind or having a severe visual loss. This is far more than the 35 percent reported for multihandicapped blind children in school (Table 2A).

The outstanding cause of blindness is again retrolental fibroplasia, reported for 48 (25 percent) of the children. Next is optic atrophy, congenital blindness, glaucoma, and cataracts. Cause of blindness was not reported for 51 children (27 percent), which is more than twice as large a percentage as reported for children in school.

Table 4B presents information on the handicaps of the group. Mental retardation is reported for 130 (69 percent) of the 189 children. Emotional handicaps are next with 84 children (44 percent) being affected. Besides hearing and the concomitant communication and speech defects, cerebral palsy is reported for 36 (19 percent) of the children and orthopedic handicaps for 19 (10 percent).

The average number of handicaps per child is 3.0. This is by comparison with other groups a small number. However, it must be kept in mind that these are multihandicapped blind children not in school and, therefore, the identification of handicaps present in many children, as well as the degree of their severity, has not been reported as reliably and frequently as for the other groups. The parents or short-term visits by a professional representative are in most cases the only source of information available.

Table 4C shows the county distribution of these children: 87 (56 percent) live in Southern California and 69 (44 percent) in Northern California. Residence has not been reported for 33 of them.

Multihandicapped Blind Children of Preschool Age

Table 5A shows that most of the 132 multihandicapped blind children of preschool age were born in the years 1962 to 1965. It is most likely that some of the children born in 1967, and certainly those born in 1968, have not yet been reported, since it is difficult or impossible to determine additional handicaps and their severity in children of such a young age.

Practically all of these young children live with their families, since most of those listed as attending the Blind Children's Center in Los Angeles, preschool groups, an orthopedic school, Development Centers for Handicapped Minors, and those whose placement was not reported, are not in residence there. The four children listed as being in State Hospitals were reported by agencies that either have served them in the past or are still serving them.

The majority of the children whose visual acuity has been reported are severely visually handicapped (64 out of 84). Fourteen are listed as having partial vision.

Rubella is the predominant cause of blindness (79 or 60 percent), followed by retrolental fibroplasia, cataracts and optic atrophy. The 79 rubella children are a minimum because there are most likely additional ones listed under cataracts and cause "not reported."

Table 5B shows that 102 of the 132 children (77 percent) are mentally retarded with only 12 of them in the educable category. Communication and speech handicaps were reported for 65 (49 percent) and 49 (37 percent) children respectively. Fifty-three (40 percent) had emotional difficulties, most of them in the moderate and severe ranges. Only 11.7 percent of the handicapping conditions reported fall into the "mild" classification, compared with 30.5 percent for multihandicapped blind children in school.

The number of handicaps reported for each child in addition to his blindness ranges from 35 children having only one to one child having seven handicaps.

The average number of handicaps per child (including blindness) was 3.7, which is 0.7 more than reported for multihandicapped blind children in school. The difference may be even greater because the reporting of handicaps for children in school is more likely to be complete than that for preschool blind children. Thus, it is certain that the present-day group of multihandicapped blind children of preschool age is more severely handicapped and will, when they become of school age, be a more severely handicapped group of school children than those presently enrolled in schools.

Table 5C shows that by county distribution 82 (63 percent) of the 130 children for whom residence was reported live in Southern California and 48 (37 percent in Northern California.

Deaf-Blind Children in School

Tables 6A, B, and C give the personal data on 58 deaf-blind children who are placed in educational provisions.

Data of Table 6A show the distribution of their years of birth. There are two peaks of three-year periods: 1952 to 1954 when 18 children were born and 1958 to 1960 when 24 children were born. During the earlier three-year period, 6 of the 18 children had their handicaps caused by retrolental fibroplasia. The control of retrolental fibroplasia began to take effect only after 1954. In the more recent three-year period, between 1958 and 1960, 12 of the 24 children had their cause of blindness indicated as either cataracts or rubella cataracts. It can be surmised that at least some of the cataracts reported were also rubella cataracts and that the same is true for some of the five children listed under cause "not reported." It is known that around 1959 a rubella epidemic occurred in the western part of the United States.

Fourteen deaf-blind children receive their education in the Deaf-Blind Department of the California School for the Blind, and 2 others are placed in regular classes for blind children at that school. One child, listed as attending a provision for the deaf, attends the California School for the Deaf in Berkeley (her visual handicap is listed as moderate), and another attends a Development Center for Handicapped Minors. All other children for whom a placement was reported attend local school provisions:

one in a kindergarten, 22 in regular grades, 9 are ungraded and 6 in classes for the deaf and hard-of-hearing. Placement was not reported for two deaf-blind children.

At least 38 of the 58 children have severe visual handicaps and only two were registered as partially seeing. Visual acuity was not reported for six.

Thirty-nine of the 58 children have severe or moderate hearing losses while the degree of hearing loss was not reported for the remaining 19 children. It stands to reason that those for whom the degree was not reported are likely to be either in the severe or moderate range, since a mild hearing loss can be rather easily determined as such.

Under Cause of Blindness, cataracts were reported for 11, rubella for 8, retrolental fibroplasia for 7, congenital for 6, and optic atrophy also for 6. For 5 children the cause was not reported.

Table 6B shows that 32 children were reported as mentally retarded, only 5 of whom as uneducable. Only 24 and 25 had communication and speech disorders respectively; many, if not most of them, have both together. Since there are 58 deaf-blind children in school, it must be assumed that a considerable number of them had acquired speech before they became deaf or that their moderate hearing loss did not interfere with the acquisition of speech and implicitly communication. Eleven of the children also had emotional handicaps.

The distribution of handicaps in addition to blindness shows that 16 children were deaf-blind and had no other handicap reported, while the remaining 42 had two up to seven handicaps in addition to their blindness.

The average number of handicaps per child, including blindness and deafness, is 2.8. This shows that deaf-blind children in school have on the average fewer handicaps in addition to their deaf-blindness than any other group.

The recommendations for future placement of these children indicate that only 3 of them should not remain in their present placement, 38 should remain, and for the remaining 17 no recommendation was made.

Of the 42 children for whom counties of residence were reported in Table 6C, 26 (62 percent) reside in Southern California and 16 (38 percent) in Northern California. County of residence was not reported for 16 children at the California School for the Blind.

Deaf-Blind Children in State Hospital Schools

The numbers in this group of 18 deaf-blind children, reported in Tables 7A and B, are too small to allow any statistical conclusions. All children in State Hospital Schools are in ungraded classes. Their hearing loss is either moderate or severe, and their causes of blindness are cataracts, rubella, retrolental fibroplasia, and pigmentary degeneration which was given for 2 children who are apparently twins since they have the same birthdate.

The distribution of handicaps in Table 7B shows that 16 of the 18 children have communication and speech difficulties. The average number of handicaps per pupil is 4.2, higher than that given for deaf-blind children in school.

Deaf-Blind Children (School Age) Not in School

What was said about statistical conclusions concerning the previously described group also holds true for the 35 deaf-blind children of school age who are not in school, as reported in Tables 8A, B and C. However, certain facts can be discerned.

No children were reported as having mild or moderate hearing losses; hearing loss was indicated as being severe for 22 and was not reported for 13 children. The causes of blindness are cataracts, rubella, brain damage, microcephalos, and retrolental fibroplasia.

Twenty-one of the 35 children are mentally retarded, 10 of whom uneducable. Communication and speech difficulties are present in 18 each. A rather large number of these children have orthopedic problems (15 out of 35) with only one being registered as "mild."

The number of handicaps per child shows that 12 of the 35 children have no other handicap except their deaf-blindness. Nine of these children were reported by the American Foundation for the Blind in New York from their registry of deaf-blind children which did not include information about additional handicaps. This makes the data on handicaps incomplete.

The average number of handicaps per child is 4.5 which is the highest average recorded for any of the eight groups in the Study. Due to the above-explained lack of information for 9 children, the average would be even higher if complete information had been available for these children.

County residence (Table 8C) was not reported for 5 children. Of the remaining 30, twelve reside in Southern California and 18 in Northern California. It should not surprise anyone that with such small numbers the population majority of Southern California is not necessarily reflected. It is interesting to note that the 3 deaf-blind children in Placer County (Northern California) are siblings and have the same cause of blindness, microcephalos.

Deaf-Blind Children of Preschool Age

An unexpected large number of deaf-blind children of preschool age was reported--129. It should be remembered that in the past years--the pre-rubella years--only about 20 to 25 deaf-blind children of preschool and school age were identified in California.

The "year of birth" data in Table 9A show that during the three-year period from 1961 to 1963, a total of 34 deaf-blind children were born; during the three-year period of 1964 to 1966, 93 deaf-blind children were born. The reports given for 1966 and 1967 almost certainly do not give actual numbers because deafness is not always recognized at an early age.

The placement of these children shows that while all of them live with their families, 19 receive some attention at the John Tracy Clinic in Los Angeles (minimal as it must be since this facility serves deaf children only), 12 attend a special group of preschool deaf-blind children at the San Francisco Hearing and Speech Center, 7 a similar group under the auspices of San Francisco State College, and 5 children attend other programs for preschool children.

Visual acuity was not reported for 65, one-half of the children. Of the other one-half, 47 children were severely visually handicapped, and 17 had some sight, 7 of whom were listed as partially seeing. Not surprisingly, for reasons already pointed out, the degree of hearing loss was not reported for 81 of these young children, almost two-thirds. Of the remaining ones, 45 had a severe hearing loss and only 3 a moderate loss. Thus, it appears that most of the children for whom visual acuity and degree of hearing loss were reported are severely visually and auditory handicapped.

Cause of blindness data tell the real story. Ninety-two (71 percent) are rubella children, a number that must be augmented by some of the 7 who were reported as cataract cases and of the 7 who were listed as cause "not reported." The other causes occurred in only small numbers.

Table 9B enumerates the additional handicaps of these children. Ninety-four (73 percent) of them are listed as having various degrees of mental retardation. This is a very high percentage but it must be recognized that any deaf-blind preschool child who has not been observed and adequately assisted over a considerable period of time does give the impression of being mentally retarded although he may have a much better potential. The comparatively small numbers of communication and speech handicaps listed are due to the fact that for many children of that young age, communication or speech development cannot be expected, even if they had normal hearing. Since rubella is the prevailing cause of handicaps for this group of children, the high incidence of heart defects (32 or 25 percent) must be expected. Cardiac conditions are a part of the rubella syndrome triad--cataracts, hearing loss, and heart abnormalities.

The severity of the handicaps is indicated by the fact that 32 percent are listed as severe, 10 percent as moderate, and only 4 percent as mild. For 55 percent the degree of the handicap was not reported. The number of handicaps per child shows that only 17 of the 129 children have no other handicap listed besides their deaf-blindness. All the others have from 1 to 6 additional handicaps.

The average number of handicaps for this group is 4.4, almost equaling that of the most disadvantaged group of other deaf-blind children, those not in school.

The distribution by county residence shows that 69 of the 129 children (54 percent) reside in Southern

California while the remaining 60 (46 percent) live in Northern California.

Severity of Handicaps

Table 10 presents, for seven groups of multihandicapped blind and deaf-blind children, a comparison of the severity of handicaps, reported either as mild (educable), moderate (trainable), severe (uneducable), and degree not reported. Table 11 gives the average number of handicaps per child for these seven groups. The eighth group, that of deaf-blind children in State Hospital Schools, numbered only 18 and, therefore, the percentages were too small to be meaningful.

A comparison of the percentages reported as "mild" shows that multihandicapped blind children in school have the highest percentage in this degree of severity, while deaf-blind children not in school and deaf-blind children of preschool age show the lowest percentage of mild handicaps. Conversely, multihandicapped blind children in school show the lowest percentage of severe handicaps while deaf-blind children not in school and of preschool age, with deaf-blind children in school, show the highest percentages of severe handicaps. The largest percentages of handicaps "not reported" are listed for deaf-blind children of preschool age (54.5 percent), for multihandicapped blind children not in school (53.3 percent), and for multihandicapped blind children of preschool age (43.9 percent).

This stands to reason because children not in school and of preschool age are less likely to be sufficiently well observed by trained personnel to have the degree of severity of their handicaps determined. On the other hand, this underlines the need for diagnostic facilities for these children. Deaf-blind children not in school (27.4 percent degree of severity not reported) appear to be an exception. The fact that 58.9 percent of them had handicaps of a severe nature that was most likely easy to recognize, explains the low percentage of degree "not reported" for this group.

Average Number of Handicaps Per Child

Table 11 lists the average number of handicaps for the seven groups of children. As already observed, the largest average number of handicaps per child was found for deaf-blind children not in school (4.5) and for deaf-blind children of preschool age (4.4). The smallest number (3.0) was shown for multihandicapped blind children in school and for multihandicapped blind children not in school. Thus, multihandicapped blind children of school age, whether they are in school or not in school, have an equal average number of handicaps. However, the distribution of the degree of severity of handicaps is much more favorable for those in school than for those not in school.

Frequency of Handicaps for 940 Multihandicapped Blind Children

Table 12 gives the frequency of handicaps for the four groups of multihandicapped children, not including the deaf-blind. Mental handicaps occur in 664 children (70.6 percent) and they are the most frequently occurring handicap in each of the four groups. Emotional handicaps rank second with 371 children (39.5 percent) and they hold the same place for children in school and not in school, while they are in third and fourth place respectively for preschool children and those in State Hospitals. Speech handicaps rank third, 265 children (28.2 percent) showing them, and communication handicaps fourth with 204 children (21.7 percent). Cerebral palsy is in fifth place, with 143 children (15.2 percent), and orthopedic handicaps follow in sixth place with 92 children (9.8 percent) being afflicted by them. Educational and social deprivation is listed for 74 children (7.8 percent) and epilepsy for 62 children (6.6 percent). The neurological handicaps are listed for only 42 children (4.4 percent) but it can be assumed that more than this number are affected by them and that they are only not listed because no thorough diagnostic evaluation has been done for the large majority of the children. Hearing handicaps show only low numbers (29 children or 3.1 percent) because only mild ones were included, since children with moderate and severe handicaps fall into the deaf-blind category.

Thus, it is apparent that the 940 multihandicapped blind children are a group which shows large numbers of children with mental retardation and emotional difficulties. Communication and speech handicaps also rank high and so do the two handicaps which are most likely to interfere with mobility, cerebral palsy and orthopedic handicaps.

Frequency of Handicaps for 240 Deaf-Blind Children

Table 13 reports the frequency of handicaps for the four groups of deaf-blind children. In this group also, mental retardation ranks first with 165 children (68.8 percent) showing it, almost an equal percentage as shown for the group of multihandicapped blind children. As expected with a group of deaf-blind children, about one-half of them have communication and speech handicaps. The numbers and percentages for these two handicaps are not higher because these handicaps cannot be identified in deaf-blind children of preschool age and, among those in school and not in school, some must have lost their hearing after speech was established or their degree of hearing handicap did not interfere with their ability to communicate and speak. Emotional handicaps come immediately after mental retardation and those handicaps which are connected with deaf-blindness, 42 (17.5 percent) of the children showing them. This is a far lower percentage than shown for multihandicapped blind children (39.5 percent).

It may be due in part to the fact that deaf-blind children without speech can often not be identified as being emotionally disturbed, and their behavior is ascribed to their deaf-blindness. For the deaf-blind group, in contrast to multihandicapped blind children, heart abnormalities rank far higher, with 35 children (14.6 percent), largely of preschool age, being affected by them. This is, of course, a result of maternal rubella which is the main cause of blindness for the 129 deaf-blind children of preschool age. Cerebral palsy and orthopedic handicaps rank next with 33 (13.8 percent) and 31 deaf-blind children (12.9 percent) respectively having these handicaps which interfere in varying degrees with mobility.

Conclusions

The tables presented and discussed are based on replies which were recorded on questionnaires by teachers, preschool workers or supervisors who are familiar with the children whose characteristics they reported. Their evaluation of the severity of a child's handicap is by necessity subjective since there are no objective measures available. This also holds true, though to a lesser degree, for the enumeration of the handicaps for each child. Distinctions of these kinds are difficult not only because of the subjectivity of the reporters but also because children often are "borderline cases" even to those who are professionally fully qualified to make these judgements. In addition, many children have not been given the needed opportunities which would have challenged and developed their potential. Nevertheless, the method followed in this questionnaire study, and also used by others, is at present the only way to secure badly needed and reasonably accurate data. The pretesting of the questionnaires with personnel of the California School for the Blind and its positive results confirm the high degree of validity of the method used.

In any attempt to project the number of multihandicapped blind children to be expected in the foreseeable future, the causes of blindness must receive first consideration.

For the group of multihandicapped blind children of school age, retrolental fibroplasia is the largest single cause of blindness, 245 (30 percent) of 808 children being affected by it. Retrolental fibroplasia is now reasonably well under control although 13 (10 percent) of the 132 multihandicapped blind children of preschool age still show it as their cause of blindness. Therefore, it must be assumed that maximally 30 percent of the present multihandicapped blind children population of school age would not have existed without retrolental fibroplasia and will not recur in future generations. This still leaves at least 70 percent or 563 children with blindness and multiple handicaps as the basis for future projections.

A further factor contributing to the increase of multihandicapped blind children is to be found in a change of causes of blindness that occurred during the past two or three decades. Prenatal causes of blindness, many of which affect not only the eye but also cause additional abnormalities, have increased; and such other causes as infectious diseases and accidents, many of which affect only the eye and leave the child's other sensory, intellectual and physical capabilities intact, have decreased.

Prenatal causes constituted in 1945-1946, 58.1 percent of all causes of blindness for school age children. Hatfield (Sight Saving Review, Winter 1963. Reprint, p. 5) states in the latest study of causes of blindness in school children: "Actually, if cases of blindness due to retrolental fibroplasia are excluded, it is found that 71 percent of the remaining 5,196 cases were due to prenatal influence and 29 percent to other causes." Therefore, prenatal influences have increased by 22.2 percent. On the other hand, again excluding retrolental fibroplasia, infectious diseases have decreased from 19.8 percent to 6.0 percent and injuries from 6.6 to 3.6 percent. This is a decrease of 70 percent for infectious diseases and 45 percent for injuries.

This increase in prenatal causes and decrease in infectious diseases and injuries contributes to the increase in multihandicapped blind children and to the decrease in blind children with no other handicaps. This trend will most likely continue in the foreseeable future.

The increase in population in the State of California must also be considered as a factor and may well make up for the reduction resulting from the control of retrolental fibroplasia. Therefore, any plans for future provisions for multihandicapped blind children must be based on the fact that comparatively large numbers of these children will continue to need educational facilities.

In projecting the number of deaf-blind children, the causes of blindness in deaf-blind children of preschool age must receive first consideration. The predominant role of rubella as a causative factor of deaf-blindness and concomitant cardiac and other abnormalities has been noted. It was also stated that the three-year period between 1964 and 1966 includes the birth years for the large majority of these children. The German measles epidemic between 1964 and 1966 has not only produced unexpected large numbers of deaf-blind children but also resulted in a "massive increase in the number of deaf babies" referred for instance to the San Francisco Hearing and Speech Center for special help (Bulletin of the San Francisco Hearing and Speech Center, October 1967). Rubella epidemics occur in six- to seven-year cycles and our data in Table 6A show that between 1958 and 1960 also, a considerable number of deaf-blind children were born. These two peak periods are six to seven years apart.

The questions now arise when the next rubella epidemic must be expected and whether by that time an effective vaccine will be available and applied. To reply to the last question first, there is already a vaccine in existence that can be given to non-pregnant, susceptible women of childbearing age. Pilot studies on its effectiveness are being conducted. Time magazine of April 5, 1968 reports that "thousands of doses of rubella vaccine, not yet available in the U.S.," have been flown to Taiwan which is presently experiencing another rubella outbreak and a threatened epidemic. It is hoped that these vaccines will be instrumental in avoiding the epidemic. The article also reports that a rubella vaccine "will probably be licensed in Europe by year's end, though U.S. approval will take longer."

The next epidemic of rubella in the United States is to be expected in 1970-1971. One can hope that an effective vaccine will be approved in time to prevent a future epidemic in the United States. It must be doubted, however, that such a vaccine, even if available, will completely prevent the effects of an epidemic because it may not have been universally applied to the susceptible population in a comparatively short period of time. If the vaccine is licensed in the United States in 1969, only one to two years will be available for its distribution. Thus, one must realistically count on additional numbers of multihandicapped blind children to be born during the next rubella epidemic. These children will be of preschool or school age for the subsequent eighteen years, that is at least until about 1988-1989. They will be added to those born during the rubella epidemic of 1964-1966 who will be in school at least until 1984. Additionally, it must be kept in mind that presently unknown factors may exert an influence, as rubella epidemics did when hopes were high that the control of retrolental fibroplasia will lead to a decrease in the number of blind and multihandicapped blind children.

To summarize, an analysis of the causes of blindness for multihandicapped blind children and for deaf-blind children shows that no considerable decrease in their numbers can be expected within the foreseeable future. The control of retrolental fibroplasia did not affect more than 70 percent of multihandicapped blind children whose handicaps were caused by genetic, prenatal, and disease factors which remain as yet uncontrolled. Maternal rubella has caused an appalling increase in the number of deaf-blind children who are at the present largely of preschool age. Even if rubella is controlled within the near future, these children, and possibly others resulting from an expected rubella epidemic in the early 1970's, will be of school age for 12 to 18 years. On the other hand, the numbers of blind children without additional handicaps have decreased considerably and will continue to do so if present trends persist. Therefore, any planning for educational provisions for blind children must take into consideration that the majority of blind children will not be "normal" blind children as we know them from the past but blind children with multiple handicaps and deaf-blind children, as we have come to know them in large numbers for the present. This should not obscure the fact that there are still many "normal" blind children nor the necessity of providing educational opportunities for them which will safeguard their right to develop their potential to the fullest.

P. S. The Director of this Study is aware that a statistical presentation can only enumerate but not describe the sources of human suffering. He felt this acutely with every tally of the many thousands that he made in the course of this Study and was deeply conscious of the heartaches and frustrations which they represent for the many people who are parents of these children and only too often also for the children themselves.

Part II--Recommendations for Services Needed by Multihandicapped Blind Children in California
(A Blueprint)

In order to explore the thoughts and opinions held by knowledgeable people concerned with the education of blind and multihandicapped blind children in the State of California, many conferences were held with educators, administrators of schools and agencies, parents and parent-group representatives, medical experts, workers with blind preschool children, representatives of the alumni of the California School for the Blind, and representatives of the California State Department of Education, Division of Special Schools and Services. In these conferences, the problems of multihandicapped blind and deaf-blind children were discussed and reactions to the planned proposals for services were explored. The latter were unanimously approving.

Population to Be Served

Any proposal dealing with provisions for multihandicapped blind children in the State of California must be based on two facts which characterize the fundamental changes that have occurred in the education of blind children in California.

The first fact is the substantial increase in the number of blind children in the State and the concomitant increase of public school provisions for visually handicapped children. The residential school for the blind in Berkeley has over the past two or three decades shown a stable enrollment of about 160 pupils. The local school enrollment of children who fall within the legal definition of blindness, has during the same period risen from two or three hundred to more than 1,500. California is the State in which by far the largest percentage of visually handicapped children (about 90 percent) attend local schools either with resource or itinerant teachers available. National statistics indicate that about 60 percent of visually handicapped children attend local schools and 40 percent residential schools. As the statistics presented in Part I show, local school provisions have also taken into local classes their share of multihandicapped blind and deaf-blind children.

Of the 1,700 blind children of school age in California, about 1,550 attend local schools and 150 the California School for the Blind. Of the 1,550 blind children in local schools, 433 are multihandicapped and 36 are deaf-blind which leaves a population of 1,081 "normal" blind children. Of the 150 blind children enrolled at the California School for the Blind, 104 are multihandicapped and 16 are deaf-blind which leaves an enrollment of 30 "normal" blind children. Therefore, 1,111 "normal" blind children are enrolled in facilities for blind children in California.

According to the statistics presented (Table 1), children of preschool age and of the 129 deaf-blind children of preschool age could greatly benefit by more intensive services of preschool workers and by thorough diagnostic examinations. In addition, it must be recognized that many of the 595 multihandicapped blind and deaf-blind children in school and of the 100 such children in State Hospital Schools receive only minimal educational services which are not conducive to meet their needs and improve their conditions. Thus, it appears that a staggering backlog of educational work for many hundreds of multihandicapped blind and deaf-blind children, who constitute a truly deprived group, needs to be done and done without delay so that the condition of these children will neither become permanent nor worse.

Preschool Services

At present, preschool services for young blind children are provided in Northern California by four preschool workers under the Variety Club Blind Babies Foundation auspices, and by two preschool workers in Southern California under the California State Department of Education, Division of Special Schools and Services. The State's preschool workers in Southern California have a case load of fifty to seventy families which includes many parents of multihandicapped blind and deaf-blind children. Such a case load permits only the most superficial services, with visits spaced so far apart that no consistent and effective guidance can be given.

These services began in the late 1950's when the number of "normal" blind children was predominant and when blind children of preschool age did not show as many and as severe multihandicapping conditions as are found at present. During the early 1950's when retrolental fibroplasia increased the number of blind preschool children, four preschool workers were on the State's staff, each serving a case load of thirty-five to forty children. The four preschool workers were reduced to only two when a decrease in the number of blind children of preschool age occurred due to the control of retrolental fibroplasia. The two positions were transferred to the staff at the California School for the Blind because of the increased enrollment of multihandicapped blind children. So far, the number of State preschool workers has remained at two for budgetary reasons. The Variety Club Blind Babies Foundation had at that time six preschool workers who served Northern California.

The smaller case load made more intensive services possible than are at present rendered in Southern California, the more so because there were many parents and their children who had received intensive services at a younger age so that they did not need frequent visits as they grew older except on occasions of special problems.

The case loads of preschool workers in 1968 include a majority of multihandicapped blind and deaf-blind children who need intensive services far beyond those given to the preschool blind children of earlier years. It is generally recognized that preventive and remedial educational services are most effective when they are rendered at an early age of the child. Therefore, it should be one of the basic tenets of any program for multihandicapped blind children that intensive services must be given during preschool years in order to make the child as capable as his potential permits in the areas of physical and mental development, of self-care, of socializing, and of coping with the effects of his handicaps. This can only be achieved if preschool workers have a case load which will allow them to assist parents and children by frequent visits. For this reason, _it is recommended that a case load of twenty-five families per preschool worker, with an absolute maximum of thirty, be adopted as an essential step of an adequate program serving multihandicapped blind and deaf-blind preschool children. This should be put into effect immediately_.

Types of Services Needed for School Age Children

When a multihandicapped blind child becomes of school age, a decision concerning his educational placement must be made. This decision can at present only be based on the observations of preschool workers, if they served the child at all; on the reports given by any other professional persons who had contact with the child such as pediatricians, nursery school or kindergarten teachers; and on any personal impressions that a school administrator and his assistants may get from an interview with the parents and the blind child. Experience has shown that such casual observations in many, if not most cases, do not allow for a reliable and tenable conclusion and that many children are admitted only "on trial" to an educational provision which may or may not serve their needs. Many must remain in provisions which do not serve their needs because the alternatives are actually limited to only two kinds of provisions: local or residential schools and State Hospitals.

As Part I of the Study shows, local and residential schools have large numbers of multihandicapped blind children. Many of them are receiving adequate education in these facilities, but for many of them, neither the local schools nor the residential school in its present setup offer an adequate program. Comments from those working with multihandicapped blind children in local schools stressed that many of them are there only because no other facility is available and that they could greatly improve with more intensive help. A classroom situation where thirty or more children are assigned to one teacher, and six to ten blind children, some of them multihandicapped, to one resource or itinerant teacher, does not allow any effective teaching or training of multihandicapped blind children but amounts in practice to little more than a babysitting situation.

Under the impact of this problem, which is not limited to multihandicapped blind children only, some local schools are planning to conduct diagnostic classes for children with multiple handicaps of all kinds to which some blind children may also be admitted. It must be hoped that these experimental programs will be successful and, if so, that more local schools will provide them. Also, a few school districts have started special classes for multihandicapped children because they recognize that these children do not fit into regular provisions and need different techniques of training and teaching for which a low teacher-pupil ratio would be essential. However, these low teacher-pupil ratios are not put into effect because of the financial consequences involved. Thus, these programs, like regular classes in local schools, are also not much more than a "keeping" operation though they may be helpful to some children whose multihandicapping conditions are not severe.

As our statistics demonstrate, the California School for the Blind now has a large majority of multihandicapped children (about 80 percent). Its staffing pattern has not changed essentially and, because there are some "normal" blind children enrolled, the teachers are forced into a situation where they cannot do justice to either group. Also, the teacher-pupil ratio and the teacher preparation are not such that effective services can be rendered to multihandicapped blind children. Most teachers at the California School for the Blind have been prepared to teach, and for varying numbers of years have successfully taught, blind children of normal intelligence. This does not necessarily make them capable of teaching multihandicapped blind children and some of them are certainly personally not suited for this task. Needless to say that the "normal" blind child is seriously disadvantaged in an environment where multihandicapped blind children predominate.

Fern K. Root in her article "Evaluation of Services for Multiple-Handicapped Blind Children" (International Journal for the Education of the Blind, December 1963. Pp. 33-38), considers which important questions educators must ask who wish to evaluate the effectiveness of services to multihandicapped blind children. She mentions among others the following:

> "Is there a full range of diagnostic services or a comprehensive clinic which provides psychological, developmental, neurological, psychiatric, speech and hearing and other special evaluations?
>
> "Who assumes responsibility for helping parents follow through recommendations?
>
> "Are there local or state-sponsored educational programs to which multiple-handicapped blind children may be referred if they are able to profitably participate in academic activities?
>
> "Are there local or regional training, treatment and custodial facilities for multiple-handicapped blind children who are not able to profit from the instructional program of the schools?

> "Are there provisions for long-term counseling to parents whose multiple-handicapped blind children have received adequate medical and diagnostic service and educational placement, but whose special problems are so severe that permanent educational placement is infeasible?"

So far as the State of California is concerned, we must answer:

> There are no diagnostic services available except the medically-oriented ones.
>
> There are no treatment facilities available for those who are not able to profit from the instructional programs of local or residential schools.
>
> There are neither short-term nor long-term counseling facilities for parents available.

In order to provide services for multihandicapped blind children in the State of California, the following facilities are needed:

1. A Diagnostic Center to which multihandicapped blind children can be referred from all parts of the State in order to receive a complete medical evaluation of their conditions, if it is not already available, and to receive a functional educational diagnosis which will lead to definite recommendations concerning their placement.
2. Training and Adjustment Centers for multihandicapped

blind children should be established. At present, any recommendations even if based on a diagnostic workup have only two extremes from which to choose: placement in local or residential facilities or commitment to a State Hospital. The proposed Training and Adjustment Centers should provide a remedial facility where multihandicapped blind children can receive intensive help in order to achieve a level that would either enable them to return to their families and attend local schools; to remain in the Center until they are ready to be served by Vocational Rehabilitation, a sheltered workshop, or by other arrangements that the families will make; or if at any age further improvement cannot be achieved, they will be returned to their families with their self-care skills improved according to their capabilities. This will be a great asset to them whether they remain with their families, be placed in a private institution, or committed to a State Hospital.

3. Guidance and Counseling Services to parents of multihandicapped blind and deaf-blind children of school age, in order to improve their ability to fulfill their parental responsibilities toward the multihandicapped blind or deaf-blind child and to accept and pursue the placement recommendations made by the Diagnostic Center or the Training and Adjustment Centers.

Recommendations for Establishing the Needed Services

The only residential educational facility for blind children in the State of California is the California School for the Blind in Berkeley. It consists of an administration and school building, a dormitory building for boys (Wilkinson Hall), a dormitory building for girls (Vista del Mar), a dormitory building for young children (Monroe Cottage) with an instructional center for the deaf-blind (Helen Keller Building), a gymnasium building (built in 1915), and a dining hall-kitchen building. All of these buildings with the exception of the deaf-blind center and the dining hall-kitchen building were built at least 40 years ago. So far as the buildings are concerned, the dormitory for boys is designed in such a way that it makes living arrangements, supervision, and janitorial services extremely difficult and expensive because of the extension of the building from one end to the other, and because of its very disadvantageous two-story arrangement. It fits beautifully into the landscape but it is unsuitable for the purposes it has to serve. Similar observations can be made for the residence building of the young children (Monroe Cottage and Helen Keller Building). The Helen Keller Building has a residence facility for sixteen young children, built in 1950, which is adequate, but cannot be combined with the residence facility at Monroe Cottage. Therefore, both facilities demand separate staffing at a high cost. All buildings are expensive to maintain. With the exception of the two abovementioned buildings, they must be considered as obsolete.

The grounds on which all buildings are located are at different levels and it is no exaggeration to say that they represent, together with the buildings, a concentrated example of architectural barriers. There are steps going up and down from all buildings, some of them very difficult to locate; there are curves and corners in all sidewalks connecting the buildings with variations in levels, particularly before the stairs are reached. Commuting between the different buildings and especially between the residence halls and the dining room and the residence halls and the school building is difficult even for well-oriented blind children and a health hazard for all children, particularly the younger ones, in inclement weather.

These disadvantages were less acutely felt during the time when normally capable blind boys and girls constituted a majority of the students. They make the buildings unsuitable and hazardous for use of multihandicapped blind children. As a matter of fact, over the years the school had to refuse admission to many capable visually handicapped children who suffered from an orthopedic defect or from cerebral palsy because these handicaps interfered with their mobility in this difficult terrain.

For these reasons, and for others which will become clear with the subsequent presentation of the planned services for multihandicapped blind children, it is recommended that the site and buildings of the California School for the

Blind should be given up for the purpose they presently serve and should be used for other purposes.

It is not the task of this Study to deal with the latter problem, but the following tentative suggestions for the use of this facility might be in place: expansion of the California School for the Deaf which has a considerable waiting list; sale to a private school; sale to the University of California (including the hilly area above both schools--the University of California Medical School in San Francisco is built on similarly steep grounds); sale to land developers (the property constitutes the most valuable piece of land in Berkeley). In any case, the value of the property is such that it should cover a substantial part of the costs of the subsequently developed plan for services to blind children.

"Normal" Blind Children at the California School for the Blind

The following recommendations will deal with the conversion of the present California School for the Blind into comprehensive services for multihandicapped blind children. Therefore, the group of "normal" blind children and of those multihandicapped blind children who are capable of attending regular educational provisions--all of them now placed at the California School for the Blind--must receive consideration. *It is recommended that as many of them as possible be placed in local facilities.* There are essentially three means to achieve this:

1. Children whose parents live in communities where

local facilities for blind children are available should be induced to, and assisted in, having their children return home and placed in the local schools.

2. There are some counties which, if they would combine with others, have a sufficient number of blind children to conduct a program for them either by a resource or itinerant teacher arrangement. The State Department of Education should encourage such multi-county arrangements and assist them so that they will not be a financial burden on the counties concerned. The Division of Special Schools and Services could provide itinerant teachers to serve visually handicapped high school students in local schools throughout the State.

3. There will remain a small number of children who cannot be returned to their families for individual reasons, such as that the families are not a good place for them, or that they are not yet ready to be placed in a local school without more intensive personal care. For these children, either foster home placement in a community with local provisions for blind children, or a small residential unit, the location of which will be discussed later, should be made available.

Diagnostic Center

The Diagnostic Center, considered a necessity by all those consulted in the course of this Study and also described as such in various articles, should be a separate unit serving about 40 to 50 multihandicapped blind children. Referrals would be accepted from any source that is qualified and in a position to justify a child's need for a diagnostic observation. Children should remain at this Center for as long a time as is reasonably required to arrive at a diagnosis and at recommendations for the child's future placement. Cruickshank, in recommending the establishment of residential diagnostic centers for multihandicapped blind children in his article, "The Multiple-Handicapped Child and Courageous Action" (International Journal for Education of the Blind, March 1964. Pp. 74-75) urges: "residential diagnostic centers of a relatively short-term duration wherein the complete skills of many diagnosticians can be brought to bear on the complicated physical, psychological, and educational problems of these children. In a sense we are advocating the establishment in this area of what has apparently been a successful model in California, namely, the diagnostic residential centers of that State for cerebral palsy."

Such a Center must be placed within a reasonable distance from a medical center so that its specialists can be available to the Center as consultants. "Diagnosticians representing many disciplines will be required, in addition to ophthalmology which is usually represented in a table of organization of a residential school. Pediatric psychiatrists, clinical psychologists with a speciality in the childhood years, pediatricians, pediatric neurologists, otologists and audiologists, endrocrinologists, and educators with broad special education experience will all be needed at some phase of the program." (Cruickshank, ibid, p. 69)

Full-time positions in such a Center must include: educators who work with the children in small groups either 2 to 3 for one teacher or 4 to 6 for two teachers; dormitory personnel who must be trained educators so that they can continue the work of the teachers in the dormitory situation; psychologists; and social case workers. The psychologists and social workers will function not only as members of the diagnostic team but will also obtain information from the parents and will assist them in better understanding themselves and their child and in more adequately meeting his needs. The Center should also have short-term residential facilities for parents of children to be admitted, so that they will be available for interviews and during their child's first days at the Center.

Staffing and administration of such a Diagnostic Center is not a new task for the Division of Special Schools and Services. This Division has carried the same responsibility for the Diagnostic Centers for Cerebral Palsied Children and carries it now for the two Diagnostic Centers for Neurologically Handicapped Children. The patterns established, particularly for the last-mentioned ones, can readily be applied to the recommended Diagnostic Center for Multihandicapped Blind Children.

Training and Adjustment Centers (T and A Centers)

Two Training and Adjustment Centers with a capacity from 50 to 80 children each should be established, one in Northern California and one in Southern California.

These T and A Centers should have the same function as a residential school for the blind, except that they should be geared in purpose, methods, and staffing to the needs of multihandicapped blind children. The purpose should be to rehabilitate as many children as possible for return to local schools. For those who cannot be returned, opportunities should be provided for developing their non-academic potential in self-care, social skills, mobility, occupational skills, and in acquiring a workable knowledge of the world in which they must live. Thus, the T and A Center will function for some as a temporary rehabilitation facility, and for others as a continuing residential placement until they have reached an age when adult rehabilitation services can take over. It must be expected that some of the children referred to these Centers will, in spite of all efforts, not be able to function anywhere but in an institutional environment. These children should be returned to their families and recommendations for their future should be explained to the parents who will have to make the ultimate decisions.

Methods in these T and A Centers should fit their purpose. Mental retardation is the most frequent multihandicapping condition. For these children academic studies are less important than developing their potential in self-care, social skills, mobility, occupational skills, and in learning about the world around them. There are some children who are emotionally disturbed, orthopedically handicapped, or cerebral palsied whose mental capacity is normal or superior. For them, adequate academic training should be provided.

The staffing of the T and A Centers should essentially be the same as that desirable for a residential school for the blind, with a full-time physiotherapist added. It will require a low teacher-pupil ratio, one teacher for 3 to 4 children, or better, two teachers for 6 to 8 children. This should be the actual ratio for classroom work. In addition, special teachers in certain other fields will be required, such as mobility instruction, crafts, physical education, music, and homemaking. The dormitory personnel should be trained in working with exceptional children so that gains made by the teachers will be followed up, and not lost, in the dormitory situation. Therefore, the dormitory personnel-children ratio should be about 1 to 5, the former actually present at any time during the day. For nighttime duty, an attendant can supervise a much larger number of (sleeping) children.

The purposes and functions of a T and A Center are well recognized by the Superintendent of the California

School for the Blind and by many of its staff members who had in the past years abundant experience with multihandicapped blind children. The California School for the Blind, however, was never designed nor was it ever staffed to serve this group of children.

Guidance and Counseling Services

As already described on page 40, these services to parents of multihandicapped blind and deaf-blind children of school age should be established. They should serve the parents of children admitted to the Diagnostic Center and to the T and A Centers. It is recommended that one social worker be assigned to each of the three Centers to meet this need. If the population in any of these Centers should rise above 40, an additional social worker should be allowed.

Deaf-Blind Center

Federal legislation has already been passed to establish regional centers for deaf-blind children and a national center for deaf-blind youths and adults. These centers have not yet been financed in the Federal budget but the U.S. Office of Education has already undertaken steps to plan for the establishment and conduct of such centers. There is no doubt that the California School for the Blind will be one of the regional centers and that Federal support will be forthcoming for the construction, as well as the operation of this center. The present facility for deaf-blind children at the California School for the Blind cannot serve more than about 16 deaf-blind children. Although some of the 129 deaf-blind children of preschool age reported in the Study may go to local schools, the majority of them will need residential placement for diagnostic purposes as well as for their education. They are deaf-blind as a result of maternal rubella and, therefore, more severely multihandicapped and, thus, less likely to be able to attend any local school.

Locations

It is recommended that the Diagnostic Center, one of the T and A Centers, the Deaf-Blind Center, and, if established, the residential unit for "normal" blind children attending nearby local schools, be established as one "Educational Park" for visually handicapped children. The advantages for such a combination are obvious. One superintendent and the necessary administrative staff could serve all components; one central kitchen with a number of small dining halls attached could serve the whole population; consultant staff members could be available to each component when needed; recreational facilities, such as gymnasium, swimming pool, playfields, could serve all components to be used at pre-arranged times; specialized staff, such as mobility instructors, psychologists, social workers, physical-occupational therapists could be shared by all components; exchanges of staff members according to skills and preferences could be arranged; and social work services for parents of preschool age children and of school age children could be rendered from this location with office space and secretarial assistance available to them. For the social workers serving preschool and school age children, this would be a great advantage because they could coordinate their services.

If it should be decided to locate this "Educational Park" in Northern California, within reasonable reach of a comprehensive medical facility such as the University of California Medical School, another T and A Center should be established in Southern California. If the "Educational Park" should be located in Southern California, also in the vicinity of a medical center, a T and A Center should be established in Northern California.

Plans for the Interim Period

It is recognized that even with the promptest response of all concerned, considerable time will be needed for a transition from the present status to that recommended in this Study. Legislation might be needed and budgetary provisions will need to be made and approved. Also, the actual planning and building of the new facilities will require time. For this reason, it is necessary to suggest some ways of meeting the present acute needs of the population described in this Study. It is suggested that:

1. Additional preschool workers be allowed as a part of the next budget of the California School for the Blind. As already indicated, one preschool

worker should serve 25 to maximally 30 families in which a blind child of preschool age grows up.

2. Additional teachers as well as counselors be provided for the presently enrolled children at the California School for the Blind. The teacher-pupil ratio should be set at 1 to 5 for classroom enrollment, with teachers required for such subjects as physical education, music, crafts, etc., added. So far as counselors are concerned, the recommendations of the Child Welfare League of America in _Standards for Services of Child Welfare Institutions_ seems well applicable. They recommend: "Normally there should be at least one adult, with no other major responsibilities, to six children." In applying this ratio, variations according to age and special problems, such as deaf-blindness, must receive consideration. The increase in teaching and counseling staff would not only assist in meeting current needs but would also provide trained personnel for the planned facilities. A corresponding increase in supervisory personnel for the teaching staff and for the Counselor staff should also be allowed.

3. Some long-needed additions to the staff should be provided to assist in the management of problems of multihandicapped blind children: a clinical psychologist, increased psychiatric consultation, a social worker to work with parents, additional mobility

instructors, and a part-time physiotherapist.

4. Teacher education facilities should be made aware of the increased employment opportunities in the field of multihandicapped blind children so that they can increase their efforts in recruiting and educating the needed personnel.

5. Teacher education institutions need to make further provisions for the education of teachers of multihandicapped children, including the multihandicapped blind, so that this large and increasing group of children can be educated by more adequately prepared educators.

6. Changes in the credentialing of teachers in special education should be made so that the unrealistic division of credentials by dominant handicaps is supplemented or replaced by a credential for the teaching of multihandicapped children.

Conclusions

The people of the State of California, through their legislative representatives, and the California State Department of Education have always shown understanding and compassion for handicapped children. They have built for them in the past years a completely new School for the Deaf in Riverside, a Diagnostic Center for Cerebral Palsied Children in Northern California and another one in Southern California (both are now functioning as Diagnostic Centers for Neurologically Handicapped Children), and they have built a completely new plant to replace the old California School for the Deaf in Berkeley. It must be hoped that in this hour of urgent need, they will not fail the hundreds of multihandicapped blind children who depend upon them for an immediate solution which will provide for them an education suited to their needs or in other words equality of educational opportunity.

Table 1

MULTIHANDICAPPED BLIND CHILDREN IN CALIFORNIA

	N	
Multihandicapped Blind Children in School	537	
Multihandicapped Blind Children in State Hospital Schools	82	
Multihandicapped Blind Children (School Age) Not in School	189	
Multihandicapped Blind Children of Preschool Age	132	
Total, Multihandicapped Blind Children		940
Deaf-Blind Children in School	58	
Deaf-Blind Children in State Hospital Schools	18	
Deaf-Blind Children (School Age) Not in School	35	
Deaf-Blind Children of Preschool Age	129	
Total, Deaf-Blind Children		240
TOTAL	1,180	
Visually Handicapped Patients 21 Years or Under in State Hospitals (100 additional accounted for in lines 2 & 6):	1,217	

Table 2A

537 MULTIHANDICAPPED BLIND CHILDREN IN SCHOOL

Year of Birth

	N		N
1962	11	1953	79
61	12	52	51
60	28	51	40
59	40	50	36
58	39	49	13
57	35	48	8
56	47	47	6
55	42	Not Reported	2
54	48		

Grade Placement

Kg	9	10	18
1	18	11	5
2	22	12	6
3	20	Primary	5
4	33	Junior High	4
5	29	High School	6
6	29	Ungraded	239
7	21	Not Reported	25
8	25		
9	23		

Visual Acuity

No Vision	110	20/200	60
LP	70	20/200 - 20/70	81
Some	7	Partial	15
Blind	147	Not Reported	47

Cause of Blindness

RLF	168	Retinitis Pigmentosa	4
Cataracts	57	Brain Damage	6
Optic Atrophy	42	Aphakia	4
Myopia	26	Retinal Degeneration	3
Congenital	22	Microphthalmos	3
Glaucoma	19	Uveitis	3
Anophthalmos	14	Meningitis	3
Nystagmus	10	Retinal Detachment	3
Macular Degeneration	10	Brain Tumor	3
Albinism	9	Amblyopia	3
Rubella	7	Various	50
Chorioretinitis	5	Not Reported	63

School Placement

Local Schools	433	California School for the Blind	104

Table 2B

537 MULTIHANDICAPPED BLIND CHILDREN IN SCHOOL

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	170	121	16	43	350
	Mild	Moderate	Severe		
Hearing	16	--	--	4	20
Communication	11	18	18	26	73
Speech	40	31	28	44	143
Cerebral Palsy	16	23	9	28	76
Orthopedic	11	10	12	15	48
Epilepsy	12	7	3	11	33
Emotional	55	61	51	47	214
Educational	--	--	--	58	58
Socio-Cultural	--	--	--	10	10
Neurological	--	--	--	9	9
Heart	--	--	--	7	7
Coordination	--	--	--	5	5
Bilingual	--	--	--	5	5
Various	--	--	--	35	35
Total	331	271	137	347	1,086
Percent	30.5	24.9	12.7	31.9	

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	244	145	77	45	16	9	1

Average Number of Handicaps Per Child (including blindness): 3.0

Recommendations for Future Placement

Remain	370
Should not remain	35
Not reported	132

Table 2C

COUNTY DISTRIBUTION

537 Multihandicapped Blind Children in School

CSB	104
Alameda	26
Butte	1
Colusa	1
Contra Costa	12
Del Norte	1
Fresno	8
Glenn	4
Imperial	1
Kern	9
Los Angeles	175
Madera	3
Marin	5
Mendocino	2
Napa	3
Orange	12
Riverside	7
Sacramento	25
San Bernardino	18
San Diego	16
San Francisco	31
San Joaquin	15
San Mateo	9
Santa Barbara	3
Santa Clara	10
Shasta	2
Siskiyou	1
Solano	3
Sonoma	5
Stanislaus	8
Tulare	2
Ventura	8
Yolo	7

Table 3A

82 MULTIHANDICAPPED BLIND CHILDREN IN STATE HOSPITAL SCHOOLS

Year of Birth

	N		N
1963	1	54	11
62	1	53	12
61	2	52	9
60	1	51	7
59	5	50	6
58	4	49	6
57	1	48	3
56	2	Not Reported	3
55	8		

Grade Placement

Ungraded	82

Visual Acuity

No Vision	21
LP	4
Some	1
Blind	46
Not Reported	10

Cause of Blindness

RLF	29
Cataracts	7
Glaucoma	3
Anophthalmos	2
Trauma	3
Rubella	2
Various	10
Not Reported	26

Table 3B

82 MULTIHANDICAPPED BLIND CHILDREN IN STATE HOSPITAL SCHOOLS

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	13	64	2	3	82
	Mild	Moderate	Severe		
Hearing	--	--	--	--	--
Communication	1	23	9	5	38
Speech	5	14	13	7	39
Cerebral Palsy	--	--	3	4	7
Orthopedic	3	2	--	2	7
Epilepsy	--	1	2	3	6
Emotional	3	5	7	5	20
Psychotic Reaction	--	--	--	6	6
Encephalopathy	--	--	--	10	10
Environmental	--	--	--	1	1
Cerebral Lipoidosis	--	--	--	1	1
Mongolism	--	--	--	2	2
Total	25	109	36	49	219
Percent	11.4	49.8	16.4	22.4	

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	13	27	20	19	2	1	-

Average Number of Handicaps Per Child (including blindness): 3.7

Table 4A

189 MULTIHANDICAPPED BLIND CHILDREN (SCHOOL AGE) NOT IN SCHOOL

Year of Birth

	N		N
1961	7	1953	17
60	9	52	22
59	7	51	15
58	8	50	12
57	15	49	15
56	14	48	12
55	7	47	3
54	20	Not Reported	6

Visual Acuity

No Vision	59
LP	26
Some	23
Blind	24
20/200	12
Partial	9
Not Reported	36

Cause of Blindness

RLF	48	Macular Degeneration	4
Optic Agrophy	12	Microphthalmos	4
Congenital	11	Trauma	4
Glaucoma	11	Hydrocephalos	3
Cataract	9	Rubella	2
Brain Damage	5	Various	21
Nystagmus	4	Not Reported	51

Placement

Home	115
Home (Left School)	60
Not Reported	14

Table 4B

189 MULTIHANDICAPPED BLIND CHILDREN (SCHOOL AGE) NOT IN SCHOOL

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	15	39	17	59	130
	Mild	Moderate	Severe		
Hearing	4	--	--	2	6
Communication	--	6	12	10	28
Speech	3	4	11	16	34
Cerebral Palsy	4	3	4	25	36
Orthopedic	2	5	3	9	19
Epilepsy	--	3	1	7	11
Emotional	2	14	28	40	84
Neurological	--	--	--	21	21
Socio-Cultural	--	--	--	5	5
Autism	--	--	--	2	2
Brain Damage	--	--	--	4	4
Heart	--	--	--	2	2
Various	--	--	--	4	4
Total	30	74	76	206	386
Percent	7.8	19.2	19.7	53.3	

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	84	59	19	15	7	3	2

Average Number of Handicaps Per Child (including blindness): 3.0

Table 4C

COUNTY DISTRIBUTION

189 Multihandicapped Blind Children (School Age) Not in School

Alameda	5
Butte	1
Contra Costa	3
Fresno	6
Glenn	1
Humboldt	1
Imperial	1
King	1
Kern	2
Los Angeles	58
Madera	1
Marin	3
Mendocino	2
Merced	1
Orange	8
Riverside	3
Sacramento	5
San Bernardino	3
San Diego	4
San Francisco	14
San Luis Obispo	4
San Mateo	1
Santa Barbara	1
Santa Clara	8
Shasta	1
Siskiyou	2
Solano	1
Sonoma	3
Stanislaus	1
Tulare	1
Ventura	3
Yolo	5
Yuba	2
Not Reported	33

Table 5A

132 MULTIHANDICAPPED BLIND CHILDREN OF PRESCHOOL AGE

Year of Birth

	N		N
1960	4	1965	27
61	6	66	13
62	24	67	6
63	26	68	1
64	24	Not Reported	1

Visual Acuity

No Vision	21
LP	27
Some	16
Blind	6
Partial	14
Not Reported	48

Cause of Blindness

Rubella	28
RLF	13
Cataracts	11
Optic Atrophy	9
Cortical Deficiency	5
Glaucoma	5
Brain Damage	4
Hydrocephalos	4
Congenital	3
Meningitis	3
Macular Degeneration	3
Various	32
Not Reported	12

Placement

Home	51	DCHM	5
Blind Children's Center	33	State Hospitals	4
Preschool	15	Not Reported	23
Orthopedic School	1		

Table 5B

132 MULTIHANDICAPPED BLIND CHILDREN OF PRESCHOOL AGE
(excluding deaf-blind)

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	12	29	14	47	102
	Mild	Moderate	Severe		
Hearing	3	--	--	--	3
Communication	7	8	31	19	65
Speech	3	6	23	17	49
Cerebral Palsy	3	1	5	15	24
Orthopedic	2	1	5	10	18
Epilepsy	5	2	2	3	12
Emotional	6	12	17	18	53
Heart	--	--	--	9	9
Cleft Palate	--	--	--	4	4
Neurological	--	--	--	2	2
Various	--	--	--	10	10
Total	41	59	97	154	351
Percent	11.7	16.8	27.6	43.9	

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	35	30	29	26	8	3	1

Average Number of Handicaps Per Child (including blindness): 3.7

Table 5C

COUNTY DISTRIBUTION

132 Multihandicapped Blind Children of Preschool Age (excluding deaf-blind)

Alameda	9
Contra Costa	5
Humboldt	1
Imperial	1
Kern	3
Los Angeles	71
Marin	1
Merced	2
Napa	1
Orange	1
Sacramento	3
San Diego	2
San Francisco	5
San Joaquin	2
San Luis Obispo	3
San Mateo	4
Santa Barbara	1
Santa Clara	7
Santa Cruz	1
Solano	1
Sonoma	1
Stanislaus	1
Sutter	1
Tehama	1
Tulare	1
Yolo	1
Not reported	2

Table 6A

58 DEAF-BLIND CHILDREN IN SCHOOL

Year of Birth

	N		N
1962	1	1955	1
61	3	54	5
60	5	53	6
59	13	52	7
58	6	51	4
57	1	50	1
56	4	48	1

Grade Placement

Kg	1	9	3
2	2	10	3
3	3	11	1
4	3	CSB	16
5	1	Deaf	7
6	2	Ungraded	9
7	1	DCHM	1
8	3	Not Reported	2

Visual Acuity

No Vision	6	20/200	10
LP	14	Partial	2
Some	18	Not Reported	6
Blind	2		

Hearing Loss

Moderate	14
Severe	25
Degree Not Reported	19

Cause of Blindness

Cataracts	11	Aphakia	4
Rubella	8	Myopia	2
RLF	7	Various	9
Congenital	6	Not Reported	5
Optic Atrophy	6		

School Placement

Local Schools	38	DCHM	1
CSB	16	Not Reported	2
CSD	1		

Table 6B

58 DEAF-BLIND CHILDREN IN SCHOOL

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	13	9	5	5	32
	Mild	Moderate	Severe		
Hearing	--	14	25	19	58
Communication	1	3	18	2	24
Speech	1	--	19	5	25
Cerebral Palsy	--	3	1	1	5
Orthopedic	--	--	1	--	1
Epilepsy	--	--	--	2	2
Emotional	2	2	5	2	11
Various	--	--	--	3	3
Total	17	31	74	39	161
Percent	10.5	19.3	46.0	24.2	

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	16	12	8	15	6	-	1

Average Number of Handicaps Per Child (including blindness and deafness): 3.8

Recommendation for Future Placement

Remain	38
Should not remain	3
Not reported	17

Table 6C

COUNTY DISTRIBUTION

58 Deaf-Blind in School

CSB	16
CSD (North	1
Alameda	3
Contra Costa	3
Kern	1
Los Angeles	14
Mendocino	1
Orange	2
Riverside	2
Sacramento	2
San Bernardino	3
San Diego	3
San Francisco	1
San Joaquin	2
Santa Clara	1
Solano	1
Tulare	1
Ventura	1

Table 7A

18 DEAF-BLIND CHILDREN IN STATE HOSPITAL SCHOOLS

Year of Birth

	N		N
1962	1	1956	3
60	1	55	4
59	1	53	1
58	3	50	1
57	2	Not Reported	1

Grade Placement

Ungraded	18

Visual Acuity

No Vision	5
LP	2
Some	1
Blind	4
Not Reported	6

Hearing Loss

Moderate	7
Severe	9
Not Reported	2

Cause of Blindness

Cataracts	6
Rubella	3
RLF	2
Pigmentary Degeneration	2
Various	5

Table 7B

18 DEAF-BLIND CHILDREN IN STATE HOSPITAL SCHOOLS

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	1	12	--	5	18
	Mild	Moderate	Severe		
Hearing	--	7	9	2	18
Communication	--	2	14	--	16
Speech	--	--	16	--	16
Cerebral Palsy	--	1	--	--	1
Orthopedic	--	1	--	--	1
Emotional	--	2	3	--	5
Heart	--	--	--	1	1
Total	1	25	42	8	76

Number of Handicaps in Addition to Blindness

Handicaps	1	2	3	4	5	6	7
N of Children	-	2	-	9	6	1	-

Average Number of Handicaps Per Child (including blindness): 4.2

Table 8A

35 DEAF-BLIND (SCHOOL AGE) CHILDREN NOT IN SCHOOL

Year of Birth

	N		N
1960	4	1953	2
59	5	52	6
58	3	51	1
57	3	50	1
56	2	49	1
55	3	48	1
54	2	47	1

Visual Acuity

No Vision	7
LP	4
Some	3
Blind	11
Not Reported	10

Hearing Loss

Mild	--
Moderate	--
Severe	22
Not Reported	13

Cause of Blindness

Cataract	6
Rubella	4
Brain Damage	3
Microcephalos	3
RLF	2
Various	4
Not Reported	13

Placement

Home	24
Left School	6
DCHM	1
Not Reported	4

Table 8B

35 DEAF-BLIND CHILDREN (SCHOOL AGE) NOT IN SCHOOL

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	3	5	10	3	21
	Mild	Moderate	Severe		
Hearing	--	--	22	13	35
Communication	--	1	13	4	18
Speech	--	2	14	2	18
Cerebral Palsy	--	1	6	2	9
Orthopedic	1	4	7	3	15
Epilepsy	--	--	--	--	--
Emotional	--	--	1	4	5
Heart	--	--	--	2	2
Neurological	--	--	--	--	--
Other	--	--	--	1	1
Total	4	13	73	34	124
Percent	3.2	10.5	58.9	27.4	

Number of Handicaps in Addition to Blindness

Handicap	1	2	3	4	5	6	7
N of Children	12	4	1	-	7	11	-

Average Number of Handicaps Per Child Including Blindness: 4.5

Table 8C

COUNTY DISTRIBUTION

35 Deaf-Blind Children (School Age) Not in School

Alameda	1
Butte	1
Contra Costa	1
Los Angeles	5
Madera	5
Orange	1
Placer	3
Riverside	1
San Bernardino	1
San Diego	3
San Francisco	1
San Joaquin	1
San Luis Obispo	1
San Mateo	3
Sonoma	2
Not reported	5

Table 9A

129 DEAF-BLIND CHILDREN OF PRESCHOOL AGE

Year of Birth

	N		N
1967	2	1963	12
66	24	62	20
65	38	61	2
64	31		

Visual Acuity

No Vision	9
LP	22
Some	16
Blind	6
20/200	4
Partial	7
Not Reported	65

Hearing Loss

Mild	--
Moderate	3
Severe	45
Not Reported	81

Cause of Blindness

Rubella	92	RLF	2
Cataracts	7	Microcephalos	2
Optic Atrophy	3	Various	13
Congenital	3	Not Reported	7

Placement

Home	78
John Tracy Clinic	19
S.F. Hearing & Speech Center	12
S.F. State College	7
Preschool (nursery)	5
DCHM	2
Left School	1
Not Reported	5

Table 9B

129 DEAF-BLIND CHILDREN OF PRESCHOOL AGE

Handicap	Educable	Trainable	Uneducable	Degree Not Reported	Total
Mental	17	33	12	32	94
	Mild	Moderate	Severe		
Hearing	--	3	49	77	129
Communication	--	2	30	24	56
Speech	--	1	37	23	61
Cerebral Palsy	1	1	2	14	18
Orthopedic	1	1	1	11	14
Epilepsy	--	--	2	6	8
Emotional	--	2	6	13	21
Heart	--	--	--	32	32
Neurological	--	--	--	4	4
Other	--	--	--	5	5
Total	19	43	139	241	442
Percent	4.3	9.7	31.5	54.5	

	Number of Handicaps in Addition to Blindness						
Handicaps	1	2	3	4	5	6	7
N of Children	17	25	20	36	16	14	1

Average Number of Handicaps Per Child Including Blindness: 4.4

Table 9C

COUNTY DISTRIBUTION

129 Deaf-Blind Children of Preschool Age

Alameda	2
Butte	1
Colusa	1
Contra Costa	3
Humboldt	1
Imperial	2
Los Angeles	51
Monterey	2
Orange	4
Placer	1
Riverside	3
Sacramento	13
San Bernardino	2
San Diego	4
San Francisco	20
San Joaquin	3
Santa Clara	5
Shasta	3
Siskiyou	1
Solano	1
Sonoma	2
Tulare	1
Ventura	3

Table 10

COMPARISON OF PERCENTAGES OF SEVERITY OF HANDICAPS FOR SEVEN GROUPS OF MULTIHANDICAPPED BLIND CHILDREN

Groups	N	Severity of Handicaps			
		Mild	Moderate	Severe	Degree Not Reported
Multihandicapped Blind in School	537	30.5	24.9	12.7	31.9
Multihandicapped Blind in State Hospital Schools	82	11.4	49.8	16.4	22.4
Multihandicapped Blind Not in School	189	7.8	19.2	19.7	53.3
Multihandicapped Blind of Preschool Age	132	11.7	16.8	27.6	43.9
Deaf-Blind in School	58	10.5	19.3	46.0	24.2
Deaf-Blind Not in School	35	3.2	10.5	58.9	27.4
Deaf-Blind of Preschool Age	129	4.3	9.7	31.5	54.5

Table 11

COMPARISON OF AVERAGE NUMBER OF HANDICAPS FOR SEVEN GROUPS OF MULTIHANDICAPPED BLIND CHILDREN

Groups	Average Number of Handicaps Per Child
Multihandicapped Blind in School	3.0
Multihandicapped Blind in State Hospital Schools	3.7
Multihandicapped Blind Not in School	3.0
Multihandicapped Blind of Preschool Age	3.7
Deaf-Blind in School	3.8
Deaf-Blind Not in School	4.5
Deaf-Blind of Preschool Age	4.4

Table 12

Frequency of Handicaps for 940 Multihandicapped Blind Children

Handicaps	537 in School	82 State Hosp. Schools	189 Not in School	132 Pre-school	No. of Children	% of 940 Total
Mental	350	82	130	102	664	70.6
Hearing	20	--	6	3	29	3.1
Communication	73	38	28	65	204	21.7
Speech	143	39	34	49	265	28.2
Cerebral Palsy	76	7	36	24	143	15.2
Orthopedic	48	7	19	18	92	9.8
Epilepsy	33	6	11	12	62	6.6
Emotional	214	20	84	53	371	39.5
Heart	7	--	2	9	18	1.9
Deprivation	68	1	5	--	74	7.8
Neurological	9	10	21	2	42	4.4
Various	45	9	10	14	78	8.3
Total	1,086	219	386	351	2,042	

Table 13

Frequency of Handicaps for 240 Deaf-Blind Children

Handicaps	58 in School	18 State Hosp. Schools	35 Not in School	129 Pre-school	No. of Children	% of 240 Total
Mental	32	18	21	94	165	68.8
Hearing	58	18	35	129	240	100.0
Communication	24	16	18	56	114	47.5
Speech	25	16	18	61	120	50.0
Cerebral Palsy	5	1	9	18	33	13.8
Orthopedic	1	1	15	14	31	12.9
Epilepsy	2	--	--	8	10	4.2
Emotional	11	5	5	21	42	17.5
Heart	--	1	2	32	35	14.6
Neurological	--	--	--	4	4	1.7
Various	3	--	1	5	9	3.8
Total	161	76	124	442	843	

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Mr. Don Welch, Director of Special Education, Azusa Unified School District

QUESTIONNAIRE A

MULTIHANDICAPPED BLIND CHILDREN IN SCHOOL

For the purpose of the study, multihandicapped blind children are defined as visually handicapped children with other marked handicaps who for reason of their combination of handicaps cannot or should not be admitted to, and cannot profit satisfactorily from, classes provided for blind, mentally retarded, or other handicapped children. Please indicate in the relevant columns for each child whether the handicapping condition is A (mild), B (moderate), C (severe). If this is not known, insert only a checkmark. In the MR column indicate whether the child is considered E (educable), T (trainable), or U (uneducable).

Name	Date of Birth	Special Class or Grade	Visual Handicap		Other Handicaps (leave blank if not applicable)									Will Remain	Should not Remain
			Acuity	Cause	Mental Retard.	Hearing	Communication	Speech	Cer. Palsy	Orthopedic	Epilepsy	Emotional	Other		

QUESTIONNAIRE B

MULTIHANDICAPPED BLIND CHILDREN NOT IN SCHOOLS

For the purposes of the study, multihandicapped blind children are defined as visually handicapped children with other marked handicaps who for reason of their combination of handicaps cannot or should not be admitted to, and cannot profit satisfactorily from, classes provided for blind, mentally retarded, or other handicapped children. Please indicate in the relevant columns for each child whether the handicapping condition is A (mild), B (moderate), or C (severe). If this is not known, insert only a checkmark. In the MR column use E (educable), T (trainable), or U (uneducable), if this is known. In the last four columns, please enter any information that is known to you about the status and location of the child.

		Visual Handicap		Other Handicaps (leave blank if not applicable)									Status			
Name	Date of Birth	Acuity	Cause	MR	Hearing	Communication	Speech	CP	Orthopedic	Epilepsy	Emot.	Other	Left School	Not Admitted	At Home	Elsewhere (give detail)